

**NON-IMAGING, COMPUTER ASSISTED NAVIGATION SYSTEM FOR HIP
REPLACEMENT SURGERY**

ABSTRACT OF THE DISCLOSURE

5 The invention includes: a locating system; a
computer, interfaced to the locating system and
interpreting the positions of tracked objects in a
generic computer model of a patient's hip geometry; a
software module, executable on the computer, which
defines the patient's pelvic plane without reference to
previously obtained radiological data, by locating at
least three pelvic landmarks; and a pelvic tracking
marker, fixable to the pelvic bone and trackable by the
10 locating system, to track in real time the orientation of
the defined pelvic plane. Preferably, the system also
includes a femoral tracking marker, securely attachable
to a femur of the patient by a non-penetrating ligature
and trackable by the locating system to detect changes in
15 leg length and femoral offset.